

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

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- a1 1. (Currently amended) A torsional vibration damper for a rotatable shaft comprising:
- an annular inertia ring;
  - an elastomeric layer disposed radially inward from the inertia ring;
  - a polymer body disposed radially inward from the elastomeric layer, the polymer body including a radially-extending wall having opposed annular surfaces and a service port extending through the radially-extending wall between the opposed annular surfaces; and
  - an insert disposed radially inward from the polymer body, the insert formed of a structurally rigid material and mountable to the rotatable shaft, the insert including a support flange projecting radially outward into the polymer body and positioned radially inward from the service port, wherein an axial force applied to the support flange is preferentially transferred to the insert such that the polymer body remains substantially stress-free.
2. (Cancelled)
3. (Currently Amended) The torsional vibration damper of claim 1 wherein ~~the polymer body further comprises a first annular surface and a second annular surface opposite~~

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~~the first annular surface~~, and the support flange further comprises a seating surface that is substantially coextensive with one of the first and the second annular surfaces of the polymer body.

4. (Currently Amended) The torsional vibration damper of claim 3 wherein the seating surface is free of ~~the~~ a polymer material forming the polymer body.

5. (Currently Amended) The torsional vibration damper of claim 3 wherein the seating surface is at least partially encapsulated in ~~the~~ a polymer material forming the polymer body.

6. (Currently Amended) The torsional vibration damper of claim 1 wherein the polymer ~~is~~ body comprises a glass reinforced polyamide.

7. (Currently Amended) The torsional vibration damper of claim 1 wherein the polymer body comprises a polymer material that is mechanically stable at a temperature of at least about 230°F.

8. (Currently Amended) The torsional vibration damper of claim 1 wherein the ~~structurally rigid~~ structurally rigid material is a metal.

9. (Original) The torsional vibration damper of claim 1 wherein the annular inertia ring including a circumferential flange that extends radially inward into the elastomeric layer.

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10. (Original) A torsional vibration damper for a rotatable shaft comprising:

an annular inertia ring;

an elastomeric layer disposed radially inward from the inertia ring;

a polymer body disposed radially inward from the elastomeric layer; and

an insert disposed radially inward from the polymer body, the insert

formed of a structurally rigid material and mountable to the rotatable shaft, the insert including a plurality of support flanges projecting radially outward into the polymer body, adjacent ones of the plurality of support flanges having an angular spacing about a circumference of the insert, wherein an axial force applied to at least some of the plurality of support flanges is preferentially transferred to the insert such that the polymer body remains substantially stress-free.

11. (Currently amended) The torsional vibration damper of claim 10 wherein the polymer body further comprises ~~an annular~~ a radially-extending wall having a first annular surface, a second annular surface opposite the first annular surface, and a plurality of service ports extending through the annular wall between the first and the second surfaces, the plurality of service ports being angularly spaced about a circumference of the annular wall such that each of the plurality of support flanges is aligned radially with one of the plurality of service ports.

12. (Original) The torsional vibration damper of claim 10 wherein the polymer body further comprises a first annular surface and a second annular surface opposite the first annular surface, and each of the plurality of support flanges further comprises a seating

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surface that is substantially coextensive with one of the first and the second surfaces of the polymer body.

13. (Currently Amended) The torsional vibration damper of claim 12 wherein the seating surface of each of the plurality of support flanges is free of ~~the~~ a polymer material forming the polymer body.

14. (Currently Amended) The torsional vibration damper of claim 12 wherein the seating surface of each of the plurality of support flanges is at least partially encapsulated in ~~the~~ a polymer material forming the polymer body.

15. (Currently Amended) The torsional vibration damper of claim 10 wherein the polymer is body comprises a glass reinforced polyamide.

16. (Currently Amended) The torsional vibration damper of claim 10 wherein the polymer body comprises a polymer material that is mechanically stable at a temperature of at least about 230°F.

17. (Currently Amended) The torsional vibration damper of claim 10 wherein the ~~structurally rigid~~ structurally rigid material is a metal.

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18. (Original) The torsional vibration damper of claim 10 wherein the annular inertia ring including a circumferential flange that extends radially inward into the elastomeric layer.

19. (Currently Amended) A torsional vibration damper comprising:

an annular inertia ring substantially centered about an axis;

an elastomeric layer disposed radially inward from the inertia ring;

a polymer body disposed radially inward from the elastomeric layer, the polymer body having a first cylindrical surface substantially collinear with the axis; and

a insert positioned radially inward of the polymer body and formed of a structurally rigid material, the insert ~~having~~ including a second cylindrical surface confronting the first cylindrical surface and a plurality of ~~protrusions~~ splines that ~~extend project~~ project radially outward from the second cylindrical surface into the polymer body, the splines being aligned substantially parallel to the axis, the ~~protrusions~~ splines providing torque-locking structure that mechanically interlocks the polymer body with the insert so that the polymer body resists rotation relative to the insert.

20. (Currently Amended) The torsional vibration damper of claim 19 wherein the structurally rigid material is a metal and the ~~protrusions~~ splines are integrally formed with the insert.

21-23. (Cancelled)

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24. (Currently Amended) A torsional vibration damper comprising:

an annular inertia ring;

an elastomeric layer disposed radially inward from the inertia ring;

a polymer body disposed radially inward from the elastomeric layer and having an inner peripheral surface, the polymer body being formed of a polyamide composite ~~having~~ including a polyamide matrix and a reinforcing filler ~~of a relatively rigid material~~ dispersed in the polyamide matrix; and

~~a~~ an insert disposed radially inward from the polymer body, the insert being formed of a ~~first relatively~~ structurally rigid material and having an outer peripheral surface being generally coextensive with the inner peripheral surface of the polymer body.

25. (Currently Amended) The torsional vibration damper of claim 24 wherein the reinforcing filler is a ~~relatively rigid~~ material selected from the group consisting of glasses, ceramics, and carbons.

26. (Currently Amended) The torsional vibration damper of claim 24 wherein the polyamide ~~composite~~ matrix is based on a nylon copolymer.

27. (Currently Amended) The torsional vibration damper of claim 26 wherein the ~~polyamide composite includes~~ reinforcing filler comprises a plurality of glass fibers.

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28. (Currently Amended) The torsional vibration damper of claim ~~25~~ 24 wherein the ~~polyamide~~ composite does not experience significant degradation in mechanical properties when exposed to an environment in which the ambient temperature is at least about 230°F.

29. (Currently Amended) The torsional vibration damper of claim ~~25~~ 24 wherein the ~~first~~ structurally rigid material forming the insert is a metal.

30. (New) A hub mountable to a rotatable shaft, comprising:

an annular polymer body including a central bore, a radially-extending wall having opposed annular surfaces, and a service port extending through the radially-extending wall between the opposed annular surfaces; and

an insert disposed in the central bore and formed of a structurally rigid material, the insert including a support flange projecting radially outward into the polymer body and positioned radially inward from the service port, wherein an axial force applied to the support flange, when the insert is mounted to the rotatable shaft, is preferentially transferred to the insert.

31. (New) The hub of claim 30 wherein the polymer body comprises a glass reinforced polyamide.

32. (New) A hub mountable to a rotatable shaft, comprising:

an annular polymer body having a central bore; and

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an insert disposed in the central bore and formed of a structurally rigid material, the insert including a plurality of support flanges projecting radially outward into the polymer body, adjacent ones of the plurality of support flanges having an angular spacing about a circumference of the insert, wherein an axial force applied to at least one of the plurality of support flanges, when the insert is mounted to the rotatable shaft, is preferentially transferred to the insert so that the polymer body remains substantially stress-free.

33. (New) The hub of claim 32 wherein the polymer body further comprises a plurality of service ports each aligned radially with a corresponding one of the plurality of support flanges for permitting access thereto.

34. (New) The hub of claim 32 wherein the polymer body comprises a glass reinforced polyamide.

35. (New) A hub mountable to a rotatable shaft, comprising:

an insert having an outer peripheral surface; and

an annular polymer body including an inner peripheral surface defining a bore, the inner peripheral surface being generally coextensive with the outer peripheral surface of the insert for positioning the insert in the bore, the polymer body being formed of a composite including a polyamide matrix and a reinforcing filler dispersed within the polyamide matrix.



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36. (New) The hub of claim 35 wherein the reinforcing filler is a material selected from the group consisting of glasses, ceramics, and carbons.

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